

CLAIMS

1. (canceled)

2. (canceled)

3. (canceled)

4. (canceled)

5. (canceled)

6. (new) An oil pump comprising:

    a pump body having a hollow recess in a side face thereof;

    a pump cover having an inner side face closing the hollow recess in the pump body thereby forming a gear compartment;

    a drive gear driven by a drive shaft and rotatably supported in the gear compartment;

    a rotatable driven gear rotatably supported in the gear compartment in mesh with the drive gear and driven by the drive gear;

    a discharge port formed in the pump body and a discharge port formed in the pump cover, the discharge ports

defining, within the gear compartment, a discharge area for working spaces formed by the engagement of teeth of the drive gear with teeth of the driven gear;

a notch formed in the pump body and extending circumferentially from the front end of the discharge port to the rear end of the discharge area; and

a notch formed in the pump cover and extending from the front end of the discharge port to the rear end of the discharge area;

wherein one of the pump body and the pump cover is formed of cast iron and the other is formed of a light alloy;

wherein the length of the notch formed in the pump body or the pump cover formed of the light alloy is longer than that of the notch formed in the pump body or the pump cover comprising the cast iron; and

bubbles generated within the oil in the working spaces during high-speed rotation of the drive gear are reduced by the high-pressure working oil flowing back into the working spaces through the longer notch in the pump body or the pump cover formed of cast iron.

7. (new) The oil pump according to Claim 6, wherein

the driven gear is a rotatable internal gear having its outer circumference supported by the inner circumferential

surface of the gear compartment;

the drive gear is an external gear meshing with the driven gear;

the discharge port in the pump body and the discharge port in the pump cover are each arc-shaped; and

the notch in the pump body and the notch in the pump cover extend circumferentially from the front ends of the discharge port in the pump body and the discharge port in the pump cover, respectively, to the rear end of the discharge area.

8. (new) The oil pump according to Claim 7, wherein

the notch formed in the pump body or the pump cover formed of the light alloy has an approximately triangular shape and a width decreasing from the front end of the discharge port toward the rear end of the discharge area.

9. (new) The oil pump according to Claim 8, wherein

the notch formed in the pump body or the pump cover formed of the light alloy has an inclined bottom so that its depth decreases from the front end of the discharge port toward the rear end of the discharge area.

10. (new) An automatic transmission having a supply source of hydraulic pressure, wherein

the supply source of the hydraulic pressure is the oil pump according to Claim 6; and

the pump body or the pump cover formed of the light alloy is integrated with a housing of the automatic transmission.

11. (new) The oil pump according to Claim 6, wherein

the notch formed in the pump body or the pump cover formed of the light alloy has an approximately triangular shape and a width decreasing from the front end of the discharge port toward the rear end of the discharge area.

12. (new) The oil pump according to Claim 6, wherein

the notch formed in the pump body or the pump cover formed of the light alloy has an inclined bottom so that its depth decreases from the front end of the discharge port toward the rear end of the discharge area.

13. (new) The oil pump according to Claim 7, wherein

the notch formed in the pump body or the pump cover formed of the light alloy has an inclined bottom so that its depth decreases from the front end of the discharge port toward the rear end of the discharge area.